PTELEA MOLLIS VAR. CRYPTONEURA, A WAFER-ASH OF THE GEORGIA SAND-HILLS.

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In the winter of 1907 I sent to a considerable number of correspondents specimens of a wafer-ash from the fall line sand-hill region near Thomson, Georgia. Field observation had convinced me that it was not *Ptelea trifoliata*, neither did it correspond with any of the descriptions which had recently been published by Greene, Small, or Heller. Because of the descriptive appropriateness of the name, which had been given in 1849 by M. A. Curtis to a plant of North Carolina, I distributed my material as *Ptelea mollis*. The Biltmore Herbarium had previously sent out specimens from Wrightsville Sound, North Carolina (near Wilmington, the type locality of *Ptelea mollis*), which accorded with Curtis's original description but differed in several regards from my Georgian specimens.

The original publication of *Ptelea mollis* by Curtis [1] was as follows:

"Ptelea mollis, *n. sp.*— P. trifoliata, β mollis, *Torr. & Gray?* I. 680. Lateral leaflets oval, the terminal obovate, with an abrupt acute point, the under side with the petioles, panicles and young branches, clothed with a soft whitish silky villus; cymes compact, with short branches; style long; filaments equalling the anthers.— Wilmington, N. Car. Also, Newbern, N. C., *George Wilson, Esq.*: the low country of S. Car.; *Rev. T. J. Young.*

The style in this species is twice as long as in P. trifoliata, while the filaments are only about one third or one fourth as long. The mature leaves are much more rigid. With the exception of the style, this plant is much smaller in all its parts, and the sepals [are] very deciduous. Flowers tetrandrous."

Although Curtis described his plant as a *new species*, he took its name from the older *Ptelea trifoliata β mollis* T. & G. Since he himself questioned the synonym, we may compare his diagnosis with that of Torrey and Gray [2]:—

"*Ptelea trifoliata* . . . . *β mollis*: branchlets, petioles, and lower sur-

[1] New and Rare Plants, chiefly of the Carolinas, M. A. Curtis. Am. Journ. Sci. ser. 2, vii. (1849), p. 406.

[2] Fl. i. (1840), p. 680.

face of the leaves clothed with a soft tomentose pubescence, even when old. (Texas, *Drummond*!)"

It is obvious that there is scant evidence for considering the two names synonymous. If they are, it will be necessary to find another name for a plant of the Great Lake region (collected by the late Prof. C. F. Wheeler at Saugatuck, Michigan, and by Mr. C. C. Deam near Michigan City, Indiana, No. 7087, 31 July, 1910) which is now called [1] *P. trifoliata* var. *mollis* T. & G., but which is clearly different from *P. mollis* M. A. Curtis. Under the circumstances, there can hardly be any valid objection to maintaining both *P. mollis* M. A. Curtis (excl. syn.) and *P. trifoliata* var. *mollis* T. & G.

In his diagnoses of Ptelea species, Dr. Greene [2] has laid much stress upon the nervation of the samara. " . . . .This seed-bearing body is in some [species] marked by rather closely parallel transverse ridges, with lines of gland dots running between them, or else the ridges are irregularly broken and run into a reticulation, with one or more dots in the middle of each mesh. In either instance the ridges may, at the edge of the body or a little beyond it, unite to form a wall more or less definitely surrounding the body — which wall I denominate the circumvallation — or they may pass directly into the reticulation of the wing itself, leaving the body without circumvallation." It is in this character which Dr. Greene calls the "circumvallation" that both *Ptelea trifoliata* var. *mollis* (Mr. Deam's material from the sand dunes of northern Indiana) and *P. mollis* M. A. Curtis differ from the Georgian shrub which is here proposed as *P. mollis* var. *cryptoneura*.

In the one case we have typically "circumvallate" samaras, with strongly marked transverse ridges on the body; in the other case there seems to be no "circumvallation," and the transverse ridges of the body are altogether obscure. Since *Ptelea mollis* differs otherwise from its var. *cryptoneura* in merely trivial details, which might well be comprehended within the range of fluctuating variability of the species, my curiosity was aroused to find out whether or not there was actually a structural difference between them. Samaras of both types were boiled with caustic potash solution, in order to remove the softer tissues from the vascular framework. The two skeletons obtained could hardly have been told apart. In both, the longitudinal

[1] Gray's Manual, ed. 7, p. 537.

[2] The Genus Ptelea in the Western and Southwestern United States and Mexico, E. L. Greene. Cont. U. S. Nat. Herb. x. part 2 (1906), p. 51.

nerve, continuous with stipe and style, gives off parallel transverse nerves which anastomose at the edge of the body, forming a "circumvallation." In variety *cryptoneura* (so named because the fruit does not show the transverse body nerves and their anastomoses at the inner edge of the wing) the stipe of an unskeletonized samara shows but one nerve, notwithstanding the fact that the two lateral nerves are as well developed as in *P. mollis*, and can be exhibited by removing the overlying tissues. Since in these two plants the presence or absence of "circumvallation" depends upon the varying thickness of the loosely cellular tissue under the epidermis, I have not regarded it as of more than varietal worth.

Ptelea mollis var. **cryptoneura** var. nov. Frutex humilis patens, ramulis atro-purpureis, vetustioribus glabris, junioribus puberulis. Folia matura coriacea crenata, supra pallido-viridia sparsim crispo-pubescentia, subtus albicantia perdense pubescentia; foliolis ovatis apice acutiusculis, obtusis vel rotundatis, lateralibus basi abrupte angustatis; terminali lateralibus dimidio longiore, basi sensim angustato. Samarae 1.7–2.2 cm. longae, ovatae, vel fere orbiculares, apice emarginatae; centro nervos transversos et eorum confluentes ad alae insertionem solum obscurius exhibente, dense fusco-punctato; ala pallido-straminea sparsim punctata.— *Bartlett 951*, 1 Sept., 1907, and *1748*, 10 Aug., 1909, sand-hills and pine barrens near Thomson, McDuffie Co., Georgia. This variety differs from the specimens of *Ptelea mollis* distributed by the Biltmore Herbarium in the following minor points besides those already enumerated:— the leaflets are not abruptly acute at the apex; the body of the samara is more densely punctate; the samara is more nearly orbicular; the twigs are not glabrate until their second season.

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REPORTS ON THE FLORA OF THE BOSTON DISTRICT,— X.

In the genus *Scirpus* there are seven species or varieties which have been reported from only a single place, while numerous others have only a few known stations. Three or four of these are recent segregates, which have not been collected much since their characteristics